

FIGURE 1 An UMTS Modem System Block Diagram, (Prior art)

FIGURE 1 is a block diagram of a UMTS Modem System. The system includes a MAC LAYER (15) connected to a UMTS MODEM (12). The UMTS MODEM (12) contains a UMTS MODEM TRANSMITTER (11) and a UMTS MODEM RECEIVER (13). The UMTS MODEM TRANSMITTER (11) is connected to the MAC LAYER (15) and the UMTS MODEM RECEIVER (13). The UMTS MODEM TRANSMITTER (11) is connected to a D/A converter, which is connected to a HYBRID coupler. The HYBRID coupler is connected to an HPA (High Power Amplifier), which is connected to an antenna. The UMTS MODEM RECEIVER (13) is connected to the MAC LAYER (15) and the UMTS MODEM TRANSMITTER (11). The UMTS MODEM RECEIVER (13) is connected to an LNA (Low Noise Amplifier), which is connected to a HYBRID coupler. The HYBRID coupler is connected to an AGC Amp. (Automatic Gain Control Amplifier), which is connected to an A/D converter. The A/D converter is connected to the UMTS MODEM RECEIVER (13). The UMTS MODEM TRANSMITTER (11) is connected to a Clock Recovery block (47). The Clock Recovery block (47) is connected to the UMTS MODEM RECEIVER (13).

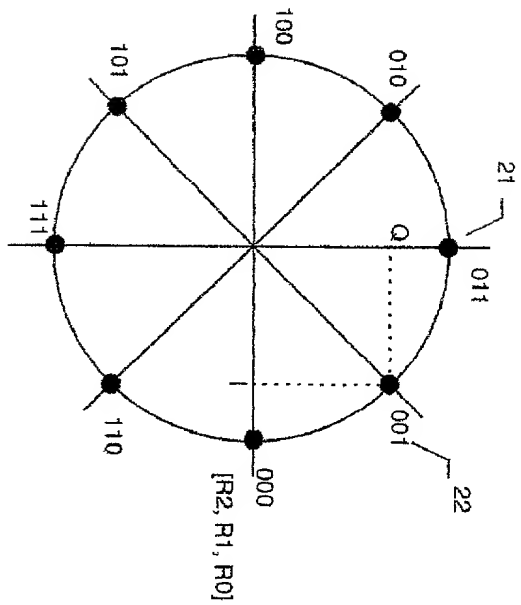
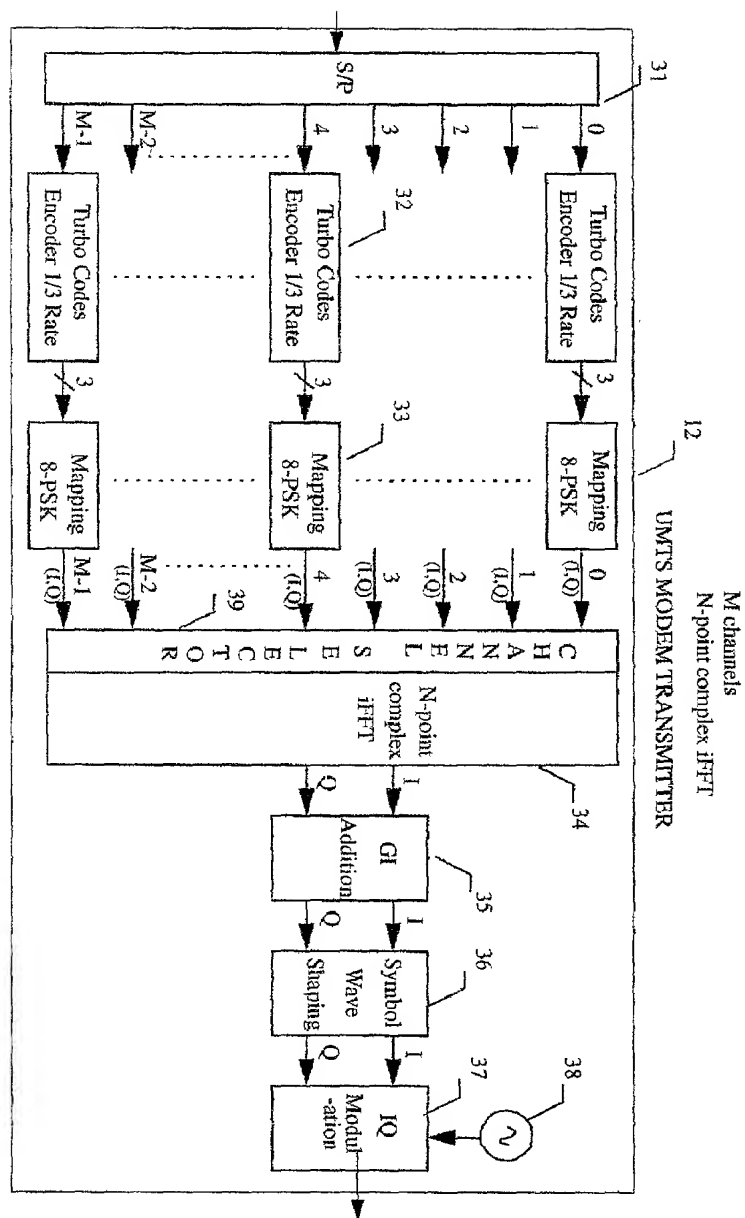


FIGURE 2. An 8-PSK constellations, (Prior art)

Table 1.

Symbol	I	Q
000	1.0	0.0
001	0.7071	0.7071
010	-0.7071	0.7071
011	0.0	1.0
100	-1.0	0.0
101	-0.7071	-0.7071
110	0.7071	-0.7071
111	0.0	-1.0

FIGURE 3. An UMTS Modem Transmitter Functional Block Diagram



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FIGURE 4. An UMTS Modem Receiver Functional Block Diagram

